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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,353	03/25/2004	Hongyong Zhang	0756-7272	5451
31780	7590	12/19/2005	EXAMINER	
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165			WILCZEWSKI, MARY A	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/808,353

Applicant(s)

ZHANG ET AL.

Examiner

M. Wilczewski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 8 and 9 is/are allowed.
- 6) ☒ Claim(s) 2-7 and 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 08/263,351.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>18 Mar 05</u> | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u>             |

Continuation of Attachment(s) 6). Other: IDSs filed 24 Nov 04; 18 Mar 05.

### **DETAILED ACTION**

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 08/263,351, filed on 2 June 1995.

### ***Drawings***

The drawings filed on 25 March 2004 are acceptable.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al., U.S. Patent 5,322,807; in view of Fonash et al., U.S. Patent 5,275,851.

Chen et al. disclose a method of manufacturing a semiconductor device comprising the steps of forming a semiconductor film comprising amorphous silicon film on an insulating substrate (col. 3, lines 16-20 and 27-32), heating the amorphous silicon film to crystallize the film (col. 3, lines 42-47); patterning the silicon film into at least one semiconductor island (Figure 1); oxidizing a surface of the semiconductor island in an oxidizing atmosphere at a pressure than atmospheric pressure, thereby forming an insulating film comprising silicon oxide 11 on the semiconductor island (Figure 1 and col. 4, lines 1-4, lines 24- 27, and lines 48-50); forming a gate electrode on the

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semiconductor island with the insulating film interposed therebetween (Figure 1 and col. 3, lines 48-52). Chen et al. lacks anticipation only of providing the semiconductor film with a crystallization promoting material. Fonash et al. disclose that nickel or palladium is provided to the semiconductor film to promote crystallization thereof, see col. 2, lines 38-48, and lines 59-66. Since the use of nickel or palladium significantly reduces the time required for crystallization of the amorphous silicon film, it would have been obvious to one skilled in the art to provide either palladium or nickel (group VIII elements) to the semiconductor film in the known method of Chen et al. thereby decreasing processing times and the cost of manufacturing the semiconductor device.

#### ***Allowable Subject Matter***

Claims 1, 8, and 9 are allowable over the prior art of record.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Wilczewski whose telephone number is (571) 272-1849. The examiner can normally be reached on Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



M. Wilczewski  
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